

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

BRITISH TELECOMMUNICATIONS
PLC and BT AMERICAS, INC.,

Plaintiffs,

v.

PALO ALTO NETWORKS, INC.,

Defendant.

C.A. No. 22-1538-CJB

JURY TRIAL DEMANDED

**OPENING BRIEF IN SUPPORT OF DEFENDANT'S
MOTION TO DISMISS UNDER RULE 12(b)(6)**

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I. STAGE OF PROCEEDINGS

British Telecommunications plc and BT Americas, Inc. (collectively, “BT”) filed this action against Palo Alto Networks, Inc. (“PAN”) alleging infringement of U.S. Patent Nos. 7,159,237 (“’237 Patent”) and 7,895,641 (“’641 Patent”) (collectively, “the Patents”). PAN respectfully moves to dismiss this case under 35 U.S.C. § 101.

II. INTRODUCTION

This Motion challenges claim 1 of the ’237 Patent and claim 1 of the ’641 Patent, which are asserted in the Complaint, and claims 18 and 26 of the ’237 Patent, which are not asserted in the Complaint but are substantially similar and linked to the same abstract idea (collectively, “the Claims”).¹ The Claims invoke generic computing components to perform the functions of collecting, filtering, and analyzing data, and then transmitting information about that data to a human for feedback. Thus, “the focus of the claims is not on [] an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools.” *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1354 (Fed. Cir. 2016). Indeed, the specification states that the improvement is providing a “monitoring, detection

¹ This Motion does not address claims 18-25 of the ’641 patent because the Complaint neither asserts those claims nor alleges that the accused products include functionality recited in those claims.

and response system *that employs human intelligence....*” ’237 patent, 1:34-40.² This is not a technological improvement to computer functionality. The Claims do not recite “any particular assertedly inventive technology for performing [the claimed] functions,” and are instead directed to the abstract ideas of collecting, filtering, and analyzing data, and then transmitting information about that data to a human for feedback. *Elec. Power*, 830 F.3d at 1354.

The Claims further lack any “element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208 (2014). “The claims...do not [] require a new source or type of information, or new techniques for analyzing it...[and] do not invoke any assertedly inventive programming.” *Elec. Power*, 830 F.3d at 1355. Rather, the Claims “merely call for performance of the claimed [collecting, filtering, and analyzing data, and then transmitting information about that data to a human for feedback] functions on a set of generic computer components.” *Id.* “It has been clear since *Alice* that a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that

² Emphasis added unless otherwise noted.

ineligible concept.” *BSG Tech. LLC v. Buyseasons, Inc.*, 899 F.3d 1281, 1290 (Fed. Cir. 2018).

Resolving eligibility on the pleadings minimizes “expenditure of time and money by the parties and the court,” guards against “vexatious infringement suits,” and “protects the public” from illegitimate patents that improperly monopolize the public store of knowledge. *Ulramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 719 (Fed. Cir. 2014) (Mayer, J., concurring). PAN submits that the Claims are invalid under 35 U.S.C. § 101, and the Complaint should be dismissed with prejudice.

III. STATEMENT OF FACTS

A. The Patents

The Patents are related and share a common specification. The Claims are simple in operation: data is collected and filtered; if the data does not correspond to a positive or negative filter, the data is analyzed; and information about the data is sent to a human for feedback.

The “problem” addressed by the Claims is that conventional firewalls, authentication mechanisms, and encryption “cannot be relied upon to work perfectly [and] complete network security also requires monitoring, detection and response in the event of a breach.” ’237 Patent, 1:13-22. System administrators, however, “do not have the time or ability to read through large amounts of constantly updated audit information, looking for attacks on their systems [or] become experts on every kind

of intrusion and to maintain that expertise.” *Id.*, 1:25-32. The solution is “not to replace a customer’s system administrators, but to augment their abilities” by “employ[ing] human intelligence” and “us[ing] trained personnel.” *Id.*, 1:23-25; 1:33-39.

The specification identifies several exemplary security components: “Probe/Sentry System,” “Security Analysts,” and “Secure Operations Centers (SOCs).”³ *Id.*, 2:33-3:55. The Probe/Sentry System “monitors sensors attached to customer network 1000 for evidence of potential security-related events” and “can be implemented in software or hardware or a combination of software and hardware” *Id.*, 4:48-52. The Probe/Sentry System performs “positive” and “negative” filtering. Data not matching a filter “form[s] the ‘residue,’ which is sent to anomaly engine 2050 for further analysis.” *Id.*, 8:45-53. The anomaly engine “determines what residue information may be worthy of additional analysis and sends such information...to the SOC” for security analyst review. *Id.*, 8:53-57. “Security analysts are personnel specializing in the analysis of network attacks.” *Id.*, 2:36-37.

³ The specification also identifies “Gateway System,” and “SOCRATES Problem and Expertise Management System” components that are not relevant to the Claims addressed in this motion.

B. Independent Claims

Claim 18 of the '237 Patent is representative of the independent claims, and Exhibit 1 to this Motion includes a chart with color-coded limitations illustrating how the independent claims are “substantially similar and linked to the same abstract idea” of collecting, filtering, and analyzing data and then transmitting information about that data to a human for feedback. *Content Extraction & Transmission LLC v. Wells Fargo Bank Nat’l Ass’n*, 776 F.3d 1343, 1348 (Fed. Cir. 2014).

Specifically, independent claims 1 and 26 of the '237 Patent are method claims directed to the operation of the probe, and include steps (a)-(e) that are essentially identical to limitations (1)-(5) of the representative claim. Claim 1 of the '641 Patent is a “system for operating a probe” that includes limitations (a)-(e) that recite the same functionality as limitations (1)-(5) of the representative claim, but additionally recites the following generic components for performing those functions: “filtering subsystem,” “communications system,” “receiver,” and “modification control system.” Thus, claims 1 and 26 of the '237 Patent and claim 1 of the '641 Patent recite identical functionality, and differ only in the names of the generic components used to perform the functionality.

C. Dependent Claims

The Complaint does not assert any dependent claims. Nonetheless, this Motion addresses claims 2-17, 19-25, and 27-42 of the '237 Patent, and claims 2-17

of the '641 patent. These claims can be grouped into five categories as indicated below. None of the claimed limitations alters the “character” of the claims under Step 1, nor do they supply an inventive concept under Step 2.

Group 1 ('237 claims 2-5, 19-22, 27-30; '641 claims 2-5)

Group 1 recites the limitations regarding analyzing status data using “multi-stage analysis” ('237 claims 2, 22, 27; '641 claim 2) or “discrimination analysis” ('237 claims 3, 19, 28; '641 claim 3) and where discrimination analysis includes “positive filtering” ('237 claims 4, 20, 29; '641 claim 4) or “negative filtering” ('237 claims 5, 21, 30; '641 claim 5).

Group 2 ('237 claims 6, 10, 23, 24, 31, 35; '641 claim 6, 10)

Group 2 additionally requires data analysis to be performed at a “secure operations center configured to receive data from the probe.” *See, e.g.*, '237 Patent, claim 6.

Group 3 ('237 claims 7-9, 12-14, 25, 32-34, 37-39); '641 claims 7-9, 12-14)

Group 3 recites additional data processing, including “aggregating and synthesizing [] status data” ('237 claims 7, 32; '641 claim 7); “cross-correlating data across [] monitored components,” “cross-probe correlation,” or “correlate data from different probes” ('237 claims 8, 12, 14, 25, 33, 37, 39; '641 claims 8, 12, 14); “analyzing the frequency of occurrence of [] events” ('237 claims 9, 13, 34, 38; '641 claims 9, 13).

Group 4 ('237 claims 11, 36; '641 claim 11)

Group 4 recites “wherein said computer-based analysis includes aggregating, synthesizing, and presenting alerts on an ensemble basis.”

Group 5 ('237 claims 15-17, 40-42; '641 claims 15-17)

Group 5 recites the following limitations related to modifying the system using feedback: “instantaneously self-tuning said probe based on previously collected status data” ('237 claims 15, 40; '641 claim 15); “consideration of non-real-time information from ongoing security research effort” ('237 claims 16, 41; '641 claim 16); “wherein said receiving feedback step occurs in substantially real time” ('237 claims 17, 42; '641 claim 17).⁴

IV. ARGUMENT

A. The Claims Are Directed to an Abstract Idea

Under *Alice* Step 1, the character of the Claims as a whole is collecting, filtering, analyzing, and transmitting data, and then making modifications based on human feedback. Specifically, the representative claim recites generic computing components in a computer network—“plurality of sensors,” “a secure operations center,” and “a probe.” '237 Patent, 36:40-45. The sensors and secure operations center are functionally claimed as “monitoring components of said network” and

⁴ The question of eligibility may properly be resolved on the pleadings without construction of any claim term in the Claims.

“configured to receive and analyze potentially security-related event data.” *Id.* The probe is functionally claimed as “configured to” “collect status data,” “analyze status data...wherein the analysis includes filtering followed by an analysis of post-filtering residue,” “transmit information...to an analyst,” “receive feedback,” and “dynamically modify an analysis capability of said probe during operation thereof based on said received feedback.” *Id.*, 36:46-63. BT’s Complaint likewise characterizes the Patents as directed to collecting, filtering, analyzing, and transmitting data, and then making modifications based on human feedback. Complaint, ¶ 35 (“The Schneier Patents...us[e] a probe that *collects status data* from monitored components, *filters that status data* positively and negatively, while *analyzing the “residue” status data* to identify potential security events. *Information about these events are then transmitted to an analyst* and feedback can be provided to the probe, which allows the probe to dynamically *modify its detection capabilities based on that feedback.*”).

Federal Circuit law, however, confirms that collecting, filtering, analyzing, and transmitting data, and then making modifications based on feedback is an abstract idea. The Federal Circuit has “repeatedly held claims directed to collection of information, comprehending the meaning of that collected information, and indication of the results, all on a generic computer network operating in its normal, expected manner to be abstract.” *IBM v. Zillow Grp.*, 50 F.4th 1371, 1378 (Fed. Cir.

2022); *see also Content Extraction*, 776 F.3d at 1343 (finding patent ineligible the “abstract idea of 1) collecting data, 2) recognizing certain data within the collected data set, and 3) storing that recognized data in a memory.”). Moreover, “merely requiring the selection and manipulation of information—to provide a ‘humanly comprehensible’ amount of information useful for users...by itself does not transform the otherwise-abstract processes of information collection and analysis.” *Elec. Power*, 830 F.3d at 1355.

The Federal Circuit has also held that “filtering content is an abstract idea because it is a longstanding, well-known method of organizing human behavior.” *Bascom Global Internet Serv., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1348 (Fed. Cir. 2016); *see also SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167 (Fed. Cir. 2018) (claims focused on “selecting certain information, analyzing it using mathematical techniques, and reporting or displaying the results” are abstract).

Courts have also found that optimizing a system using feedback is an abstract idea. *See In re Rosenberg*, 813 F. App’x 594, 596 (Fed. Cir. 2020) (finding abstract claims “directed to the basic idea of deciding whether to fine-tune a given system based on reviewing the system’s performance data”); *Twilio, Inc. v. Telesign Corp.*, 249 F. Supp. 3d 1123, 1144 (N.D. Cal. 2017) (“Selecting the best option based on separately-received feedback is a fundamental activity that has long been performed by humans.”); *ICON Health & Fitness, Inc. v. Polor Electro Oy*, 243 F. Supp. 3d

1229, 1238-39 (D. Utah. 2017) (“[H]umans have received and assessed information and thereafter provided feedback to one or more people from time immemorial.... [T]he Asserted Claims are directed to the abstract idea of providing and using feedback based upon data gathered from subjects.”).

Accordingly, the claims are directed to the abstract idea of collecting, filtering, analyzing, and transmitting data, and then making modifications based feedback.

B. The Claims Are Not Directed to an Improvement in Computer Functionality

BT’s Complaint alleges the Patents are directed to “improvements in computer networks and technology that address the[] problems in the prior art” of “limited ability to address newer (or previously unknown) forms of viruses (and malware) and detect intrusions quickly enough and to enable a response to prevent them from doing a great deal of damage within a computer network.” Complaint, ¶¶ 36-37. It further alleges the Patents address these problems by (1) “analyz[ing] residual status data...to identify other potential security events,” (2) “mak[ing] it possible for contextual information from various probes to be correlated and for empirical data to be used to improve the security of the overall system,” and (3) dynamically modifying the probe “without needing to go offline.” *Id.*, ¶ 37. These allegations are unsupported, contradicted by the specification, and fail to demonstrate a specific technological improvement to computer functionality.

The Court need not credit conclusory, unsupported allegations regarding what “improves the functioning and operations of the computer.” *Simio, LLC v. FlexSim Software Prods., Inc.*, 983 F.3d 1353, 1365 (Fed. Cir. 2020). Step 1 “depends on an accurate characterization of what the claims require and of ***what the patent asserts to be the claimed advance.***” *TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1294 (Fed. Cir. 2020). Here, the specification admits the alleged invention addresses the human resource problem that “[s]ystem administrators normally do not have the time or ability to read through large amounts of constantly updated audit information.” ’237 Patent, 1:25-28. The invention “improves” the system by offloading tasks from the system administrator to an analyst. *Id.*, 1:23-40. Namely, it “***uses trained personnel in the loop***...to help [customer system administrators] repel attacks and maintain network integrity and uptime.” *Id.*, 1:34-40. This is not an improvement to computer functionality; it simply supplements one human (the administrator) with another human (an analyst).

It is also clear that a human can take steps similar to those recited in the claim. For example, a human can (1) collect information; (2) analyze the information, including by filtering (*e.g.*, match information to a positive/negative list); (3) if there is no match, request assistance from another human (*e.g.*, a supervisor); (4) receive feedback from the other human; and (5) update the positive/negative list based on the feedback. The fact that the Claims use a generic “probe” to perform these steps

does not save them from being abstract. *F45 Training Pty Ltd. v. Body Fit Training USA Inc.*, 2021 WL 2779130, *3 (D. Del. July 2, 2021) (“Yet another clue that this claim is directed to an abstract idea is the fact that it can be performed by a human, albeit less efficiently and far more slowly, and it can be practiced with generic computer components.”); *ZapFraud, Inc. v. FireEye, Inc.*, No. 2020 U.S. Dist. LEXIS 217702, at *18-21 (D. Del. Nov. 20, 2020) (similar).

Even assuming the specification did attribute BT’s purported improvements to the alleged solutions, not one of those solutions is directed to a specific technological improvement to computer functionality. First, BT alleges that the Patents improve upon the art by “analyz[ing] residual status data[.]” Complaint, ¶ 37. The representative claim recites that the analysis “includes filtering followed by analysis of post-filtering residue,” but neither the claim nor the specification describes *how* such analysis is performed. The only relevant disclosure is a black box “[a]nomaly engine” that “determines what residue information may be worthy of additional analysis[.]” ’237 Patent, 8:53-57. At best, “residue analysis [is an] example[] of data discrimination analyses, other types of which are well-known to those skilled in the art.” *Id.*, 8:57-59. Nothing more is provided. This disclosure—sets out at “the broadest, functional level, without explaining how that is accomplished [or] a technical means for performing that function”—is insufficient

for establishing an improvement to computer functionality. *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1346 (Fed. Cir. 2018).

Second, BT alleges that the “architecture” of the Patents “makes it possible for contextual information from various probes to be correlated and for empirical data to be used to improve the security of the overall system,” which it alleges is in contrast to “previous conventional security systems [that] were constrained to pattern matching at a single point in the network.”⁵ Complaint, ¶ 38. But the claim recites “at least *one* probe,” not “various probes.” Further, the claim merely invokes generic, functional steps such as “collect status data” and “analyze status data to identify security-related events,” and then “transmit information about said identified events to an analyst.” ’237 Patent, 36:46-56. “As many cases make clear, even if a process of collecting and analyzing information is ‘limited to a particular content’ or a particular ‘source,’ that limitation does not make the collection and analysis other than abstract.” *SAP Am.*, 898 F.3d at 1168. Moreover, collecting status data from multiple probes is itself directed to the abstract idea of gathering

⁵ BT attempts to support this allegation by quoting a statement by the Examiner in the Notice of Allowability for the ’237 Patent. Complaint, ¶ 38. In that Notice, the examiner stated that “if an attack occurs” in prior art systems, “the data is transmitted for further analysis” but “[a]ll other data is usually blocked or discarded.” *Id.* That statement is agnostic to whether existing prior art systems could analyze data from multiple sources. BT’s allegation amounts to a conclusory statement without actual support.

information from multiple sources and analyzing such information at a centralized location. *See In re Rosenberg*, 813 F. App'x at 597 (finding abstract the “claimed method [that] collects data from remote clinical trials, analyzes that data a central computer, and communicates the results through instructions for management of the clinical trial.”). Accordingly, “because the claim simply invokes computer components...in a generic functional way, ‘the focus of the claims is not on such an improvement in computers as tools, but on certain independently abstract ideas that use computers as tools.’” *Id.* at 597 (quoting *Elec. Power Grp.*, 830 F.3d at 1353).

Third, BT alleges that the Patents improve computer technology by modifying the probe “without needing to go offline.” Complaint, ¶ 37. But again, neither the specification nor the claims describes *how* the probe is dynamically modified. The specification only states in broad, functional terms that the system “may be manually updated offline or dynamically” and that “updates can be sent from the SOC to the probe/sentry system and signed, verified and then securely installed.” ’237 Patent, 5:26-37. This is merely claiming the abstract idea of dynamically or automatically installing a software update over a network, not a specific improvement to computer functionality. *MyMail, Ltd. v. OoVoo, LLC*, No. 17-CV-04487-LHK, 2020 WL 2219036, at *10 (N.D. Cal. May 7, 2020) (“[T]he Court concludes that even given the Court’s construction of ‘toolbar’ as ‘a button bar that can be dynamically changed or updated via a Pinger process or a MOT script,’ the claims are directed to

the abstract idea of updating toolbar software over a network without user intervention.”); *Intell. Ventures I, LLC v. Motorola Mobility LLC*, 81 F. Supp. 3d 356, 366 (D. Del. 2015) (“the limitations...that the software updates be ‘automatically installed on the user station’ over ‘the Internet’ — do not make the claimed invention any less abstract.”).

C. The Claims Lack an Inventive Concept

The Claims do not add an inventive concept that transforms the claimed abstract idea into patent-eligible subject matter.

1. The Claimed Components Are Generic

The specification confirms that the claimed components are generic computer components, which cannot supply an inventive concept. *Mortg. Grader, Inc. v. First Choice Loan Servs.*, 811 F.3d 1314, 1324-25 (Fed. Cir. 2016) (“the claims ‘add’ only generic computer components such as an ‘interface,’ ‘network,’ and ‘database.’ These generic computer components do not satisfy the inventive concept requirement.”).

First, the Claims invoke generic “sensors for monitoring components of said network,” which the specification confirms are conventional components. ’237 Patent, 4:52-54 (“Such sensors can include firewalls and intrusion detection systems 1010, *commercially available* sensors and agents 1020...”).

Second, the Claims recite a generic “secure operations center” that is functionally described as “configured to receive and analyze potentially security-related event data.” ’237 Patent, 36:42-44. The Complaint does not allege that a generic “secure operations center” is an inventive concept, nor could it, given that it is nothing more than a central location to which data is transmitted, and where a human analyzes the data. Notably, the specification discloses technical details regarding the secure operations center that are *not claimed*. For example, it describes “Pipes [that] provide[] an encrypted, secured communications path” and “the ‘SOCRATES’ problem and expertise management system to categorize, prioritize, investigate and respond to customer incidents.” *Id.*, 3:35-37, 5:44-47; *see also id.*, 4:22-32 (describing Appendices A-C as providing “details” regarding Pipes and SOCRATES).

This contrast between the “details” in the specification, and the generically claimed “secure operations center” confirm that the *claims* fail to recite an inventive concept. *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016) (“The § 101 inquiry must focus on the language of the Asserted Claims themselves.”); *Accenture Glob. Servs. v. Guidewire Software, Inc.*, 728 F.3d 1336, 1345 (Fed. Cir. 2013) (“the complexity of the implementing software or the level of detail in the specification does not transform a claim reciting only an abstract concept into a patent-eligible system or method.”).

Third, the Claims require a generic “probe” that, according to the specification, “can be implemented in software or hardware, or a combination of software and hardware.” ’237 Patent, 4:48-50. But the Claims do not recite any hardware or software requirements, and instead describe the probe in broad, functional terms. This fails to supply an inventive concept. *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015) (“Steps that do nothing more than spell out what it means to ‘apply it on a computer’ cannot confer patent-eligibility.”) (*quoting Alice*, 134 S. Ct. at 2359).

2. The Claimed Steps Merely Recite Use of the Abstract Idea to Which They Are Directed

The Claims require that the probe is configured to “collect status data,” “analyze status data to identify potentially security-related events...wherein the analysis includes filtering followed by an analysis of post-filtering residue,” “transmit information...to an analyst,” “receive feedback [from the analyst],” and “dynamically modify an analysis capability of said probe...based on said received feedback.” These limitations simply recite use of the abstract idea itself, and therefore cannot supply an inventive concept. *BSG Tech*, 899 F.3d at 1290 (“It has been clear since *Alice* that a claimed invention’s use of the ineligible concept to which it is directed cannot supply the inventive concept that renders the invention ‘significantly more’ than that ineligible concept.”).

First, the Claims require collecting data, which is itself an abstract idea, and cannot supply the invention concept. Moreover, the specification admits that the status data can be collected using “*commercially available* sensors and agents,” and is therefore a routine activity performed by computing devices. ’237 Patent, 4:52-57.

Second, the claim limitation of analyzing the data by filtering does not confer an inventive concept. Filtering is itself an abstract idea. *Bascom*, 827 F.3d at 1348. Furthermore, the specification explains that data is filtered by negative filtering “which discards uninteresting information,” and positive filtering “which selects possibly interesting information.” ’237 Patent, 8:45-50. The concepts of pass/fail lists are clearly well-understood, routine, and conventional. *See, e.g.*, Complaint, ¶ 36 (admitting that prior art solutions made “[d]ecisions on whether traffic was bad, good, or indeterminate”).

The Claims further recites “an analysis of post-filtering residue, wherein the post-filtering residue is data neither discarded nor selected by filtering.” ’237 patent, 36:50-55. As discussed above, neither the claims nor the specification explain *how* analysis of this indeterminate data is performed, only that it is done by a nondescript “[a]nomaly engine.” *See id.*, 8:53-57. As this court has held, “limitations [] expressed through functional terms lacking in specificity or through generic structures described at a very high level of generality” do not provide an inventive

concept. *Epic IP LLC v. Backblaze, Inc.*, 351 F. Supp. 3d 733, 749 (D. Del. 2018); *see also ZapFraud*, 2020 U.S. Dist. LEXIS 217702, at *26 n.10 (similar); *Nice Sys. Ltd. v. Clickfox, Inc.*, 207 F. Supp. 3d 393, 404 (D. Del. 2016) (similar), *aff'd*, 698 F. App'x 615 (Fed. Cir. 2017).

Third, the Claims recite the step of transmitting data without any specifics. '237 Patent, 35:49-51. The “transmitting” step is therefore itself the abstract idea of transmitting data, and cannot supply the inventive concept.

Fourth, the Claims recite using human review to generate feedback. As the specification explains, “once an analyst (or security engineer) is capable of handling the ticket, he or she determines, in step 535, the symptoms, vulnerabilities and recommended solutions associated with the ticket.” '237 Patent, 10:56-59. The Federal Circuit, however, has confirmed that the addition of human review to a machine system does not supply an inventive concept. *See CardioNet, LLC v. InfoBionic, Inc.*, 816 F. App'x 471, 476 (Fed. Cir. 2020) (holding that patent claim combining machine and human review of cardiac data does not supply an inventive concept because it amounts to “spot-checking systems for quality control”); *ICON Health*, 243 F. Supp. 3d at 1238.

Finally, the Claims recite dynamically updating the analysis capability of the probe based on the feedback (*e.g.*, installing a software update). Courts have held that “dynamically chang[ing] or updat[ing]” software and “automat[ing] the delivery

of software updates” is insufficient to supply an inventive concept. *See MyMail*, 2020 WL 2219036, at *10, *19; *Intell. Ventures I*, 81 F. Supp. 3d at 267. The Patents also do not explain *how* the dynamic modification is accomplished. Indeed, the only relevant disclosure in the specification is that “[t]he software and filters . . . may be manually updated offline or dynamically (that is, during actual operation).” ’237 Patent, 5:26-29. This “functional term[] lacking in specificity” is insufficient to provide an inventive concept. *Epic IP*, 351 F. Supp. 3d at 749.

3. The Dependent Claims Do Not Recite an Inventive Concept

The Group 1 claims additionally recite “a multi-stage analysis” or “a discrimination analysis” including “positive filtering” or “negative filtering.” ’237 Patent, 35:58-67. As already discussed, these filtering limitations are themselves abstract ideas and cannot supply an inventive concept. Furthermore, the specification admits that they are well-known. *Id.*, 8:57-59 (“Negative filtering, positive filtering, and residue analysis are examples of data discrimination analyses, other types of which are well-known to those skilled in the art.”).

The Group 2 claims require “analysis at the probe and analysis at a secure operations center,” as well as “performing further computer-based analysis at a secure operations center.” ’237 Patent, 36:1-4, 36:14-17. The claim already recites that analysis is done at the probe, and that an analyst at the secure operations center provides feedback to the probe. *Id.*, 36:48-60. Thus, the analysis for the

representative claim applies equally to the Group 2 dependent claims. Furthermore, the addition limitation of “*computer-based analysis*” at the secure operations center does not supply an inventive concept. *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (“The claims’ invocation of computers adds no inventive concept.”).

The Group 3 claims recite “aggregating and synthesizing [] status data,” correlating data collected from multiple probes, or “analyzing the frequency of occurrence of [] events.” These additional limitations are simply reciting the abstract ideas of aggregating, correlating, and counting data, and cannot supply an inventive concept. *See, e.g., Digital Image Tech., LLC v. Elec. for Imaging, Inc.*, 758 F.3d 1344, 1350 (Fed. Cir. 2014) (holding that patent claims an abstract idea because it “describes a process of organizing information through mathematical correlation and is not tied to a specific structure or machine”); *Brightedge Tech., Inc. v. Searchmetrics, GmbH*, 304 F. Supp. 3d 859, 866 (N.D. Cal. 2018) (holding that patents are directed towards an abstract idea of improving market performance via data aggregation and analysis).

The Group 4 claims require “aggregating, synthesizing, and presenting alerts on an ensemble basis.” ’237 Patent, 36:18-20; *see also id.*, 16:6-12 (“[S]uch a service might...alert a human being upon such a security-related event.”). The generic functionality of implementing a computer-based alert is conventional, and does not

supply an inventive concept. *See Intell. Ventures I LLC v. Mfr. and Traders Tr. Co.*, 76 F. Supp. 3d 536, 545 (D. Del. 2014) (holding that “an automatic notification is an implementation of a conventional step” and does not supply an inventive concept); *Tenaha Licensing LLC v. Vocera Commc’ns., Inc.*, 2020 WL 30489 at *8 (D. Del. Jan. 2, 2020) (noting that automatic emergency signaling was commonly known).

The Group 5 claims additionally recite “instantaneously self-tuning said probe,” “wherein said receiving feedback step occurs in substantially real time,” or “consideration of non-real-time information from ongoing security research effort.” ’237 Patent, 36:30-37. The first two limitations are insufficient for the same reasons discussed above with respect to the “dynamically modify[ing]” limitation. Neither the claims nor the specification describe *how* feedback or updates are received “instantaneously” or “in substantially real time,” and therefore cannot supply an inventive concept. *See Epic IP*, 351 F. Supp. 3d at 749; *ZapFraud*, 2020 U.S. Dist. LEXIS 217702, at *26 n.10.

The third limitation—“consideration of non-real-time information”—amounts to nothing more than a human analyst conducting research by querying a database. *See* ’237 Patent, 2:9-15 (“In analyzing the incident, security analysts can draw upon information and knowledge contained in a variety of databases, including but not limited to security intelligence databases containing information about the

characteristics of various hacker techniques and tools and known vulnerabilities in various operating systems.”). Accordingly, this limitation fails to supply to an inventive concept. *See, e.g., Wireless Media Innovations, LLC v. Maher Terminals, LLC*, 100 F. Supp. 3d 405, 417 (D.N.J. 2015) (“[Q]uerying information in a database...is one of the most basic function of a database system.”).

V. CONCLUSION

PAN respectfully requests that the Court dismiss the Complaint.

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Respectfully submitted,

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WORD COUNT CERTIFICATION

The undersigned hereby certifies that the Opening Brief in Support of Palo Alto Networks, Inc.'s Motion to Dismiss contains 4,986 words (exclusive of the cover page, table of contents, table of authorities, and signature block) in Times New Roman 14-point font, counting using Microsoft Word 2016.

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